Comparison UUnifast and DRS

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Abstract: This is a short comparison of the evaluation results obtained from UUnifast and from DRS.

UUniFast:

For UUniFast suspension time ['sslength'] is drawn uniformly from the interval between the minimum suspension length value and maximum suspension length value. We have the following three setups:

- Setup 1 Short Suspension [0.0(Ti - Ci), 0.2(Ti - Ci)]
- Setup 2 Moderate Suspension [0.2(Ti - Ci), 0.4(Ti - Ci)]
- Setup 3 Long Suspension [0.4(Ti - Ci), 0.6(Ti - Ci)]

DRS:

Unlike UUniFast, Dirichlet- Rescaling Algorithm are used for asymmetric constraints and works with separate upper bounds and lower bounds for each task.

The three different setups for DRS used here:

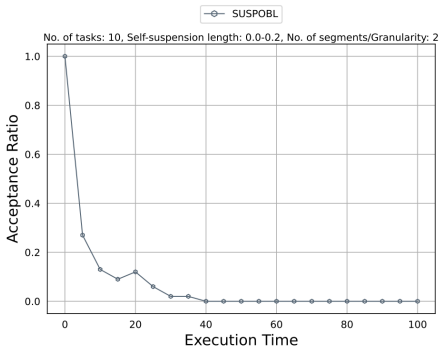
- Setup 1 (minsus+ex=0.1*number of tasks per set, maxsus+ex=1.0)
- Setup 2 (minsus+ex=0.3*number of tasks per set, maxsus+ex=1.0)
- Setup 3 (minsus+ex=0.5*number of tasks per set, maxsus+ex=1.0)

Here, we are taking three different setups each with different execution + suspension time but same execution time.

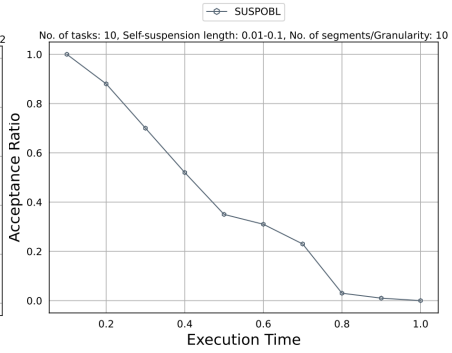
1 Suspension Oblivious

We are going to generate a suspension-oblivious schedule for the DRS and UUniFast setups explained above

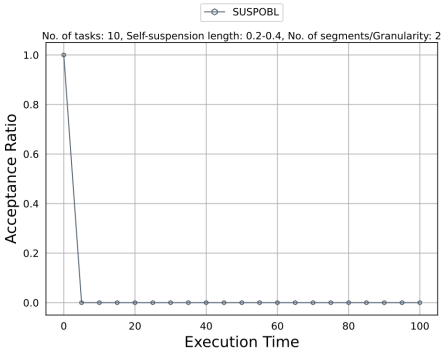
(UUnifast) **(DRS)**



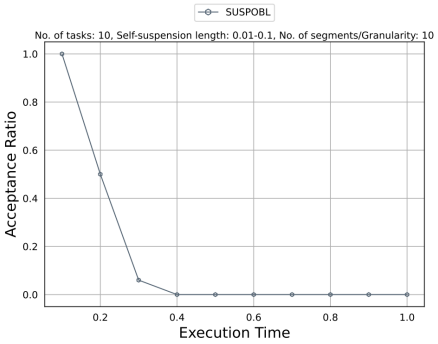
First UUnifast setup.



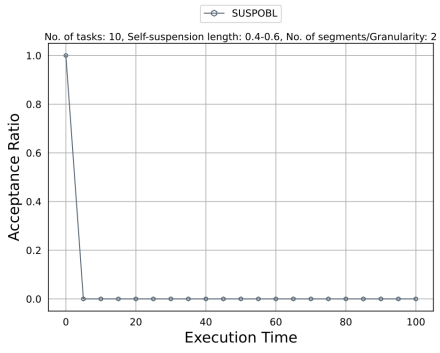
First DRS setup.



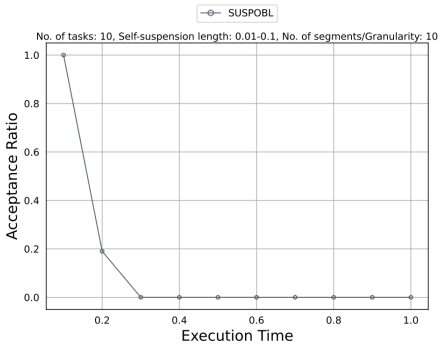
Second UUnifast setup.



Second DRS setup.



Third UUnifast setup.

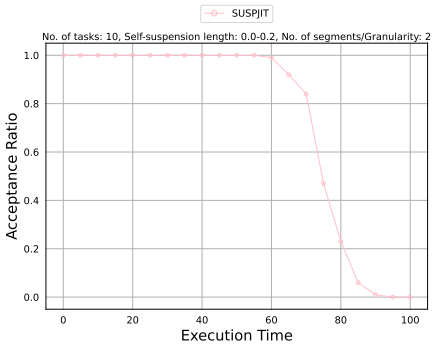


Third DRS setup.

2 Suspension Jitter

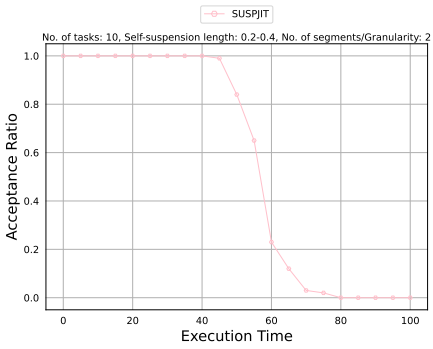
We are going to generate a suspension-jitter schedule for the DRS and UUniFast setups explained above

(UUnifast) **(DRS)**



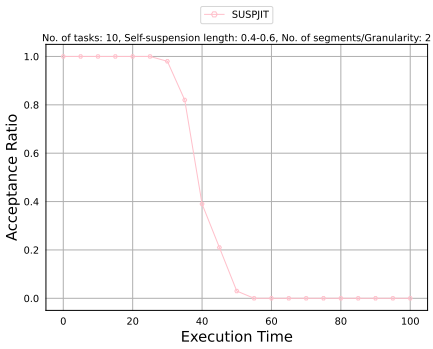
First UUnifast setup.

First DRS setup.

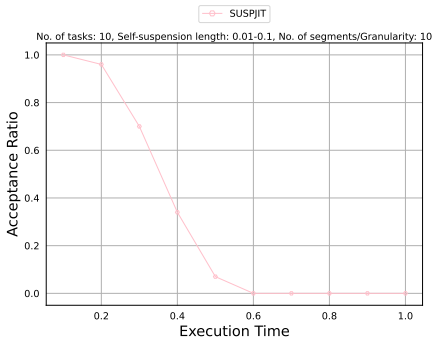


Second UUnifast setup.

Second DRS setup.



Third UUnifast setup.



Third DRS setup.